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ILLUMINATION

Cleaning & maintenance

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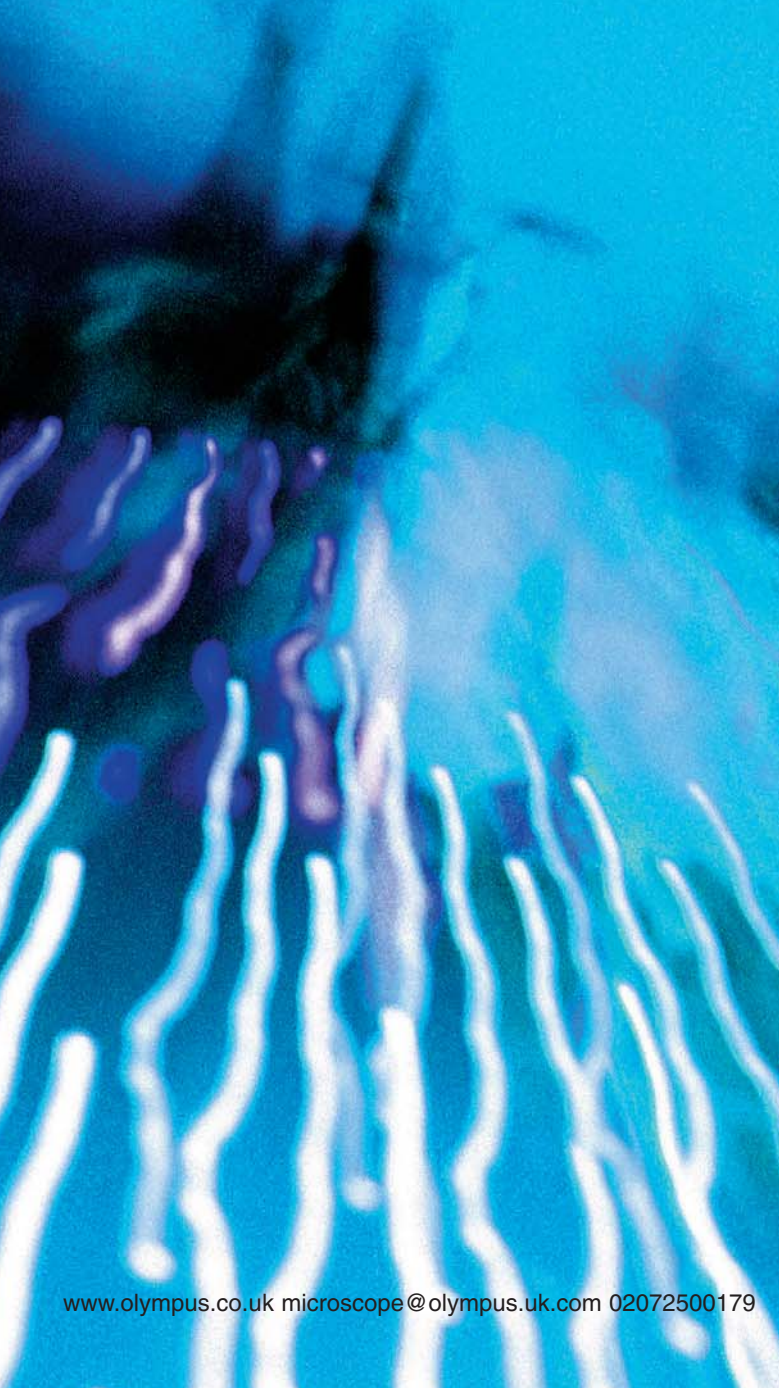
Dust and dirt particles can sometimes be seen during observation and may affect image quality. This is particularly frustrating if dust particles are visible when photographing important specimens that cannot be photographed again. Therefore, to ensure you get the most from your microscope, cleaning should be made a regular part of the maintenance routine. The following notes lead you through the basic procedures from knowing how to clean the external frame to cleaning the optical system and specimens.



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Cleaning the microscope frame

Stains on a microscope frame should be first wiped with a piece of cloth wetted with a small amount of neutral detergent and then wiped clean with a piece of cloth that has been immersed in luke-warm water. Make sure not to touch the lens and avoid using organic solvents that may damage plastic parts.

For dust contamination that adheres to painted components and is difficult to remove, wipe with a piece of cloth or soft tissue paper that has been soaked in a mixture of 7 parts ether to 3 parts alcohol. Keep the mixture away from plastic parts of the microscope to prevent damage.

How to clean the optical system

Keeping the optical system clean at all times is essential for image quality. If dust spots on optical glasses such as lenses, prisms and filters are left unattended, the dirt can be become difficult to remove and may mould. By always keeping the optical surface clean, you avoid many of the maintenance problems and should prolong the life of your microscope. Note, however, cleaning of the lens surfaces only applies to exposed areas of objectives, eyepieces, filters and condensers. If internal or major cleaning becomes necessary, please contact your Olympus microscope dealer.

Method

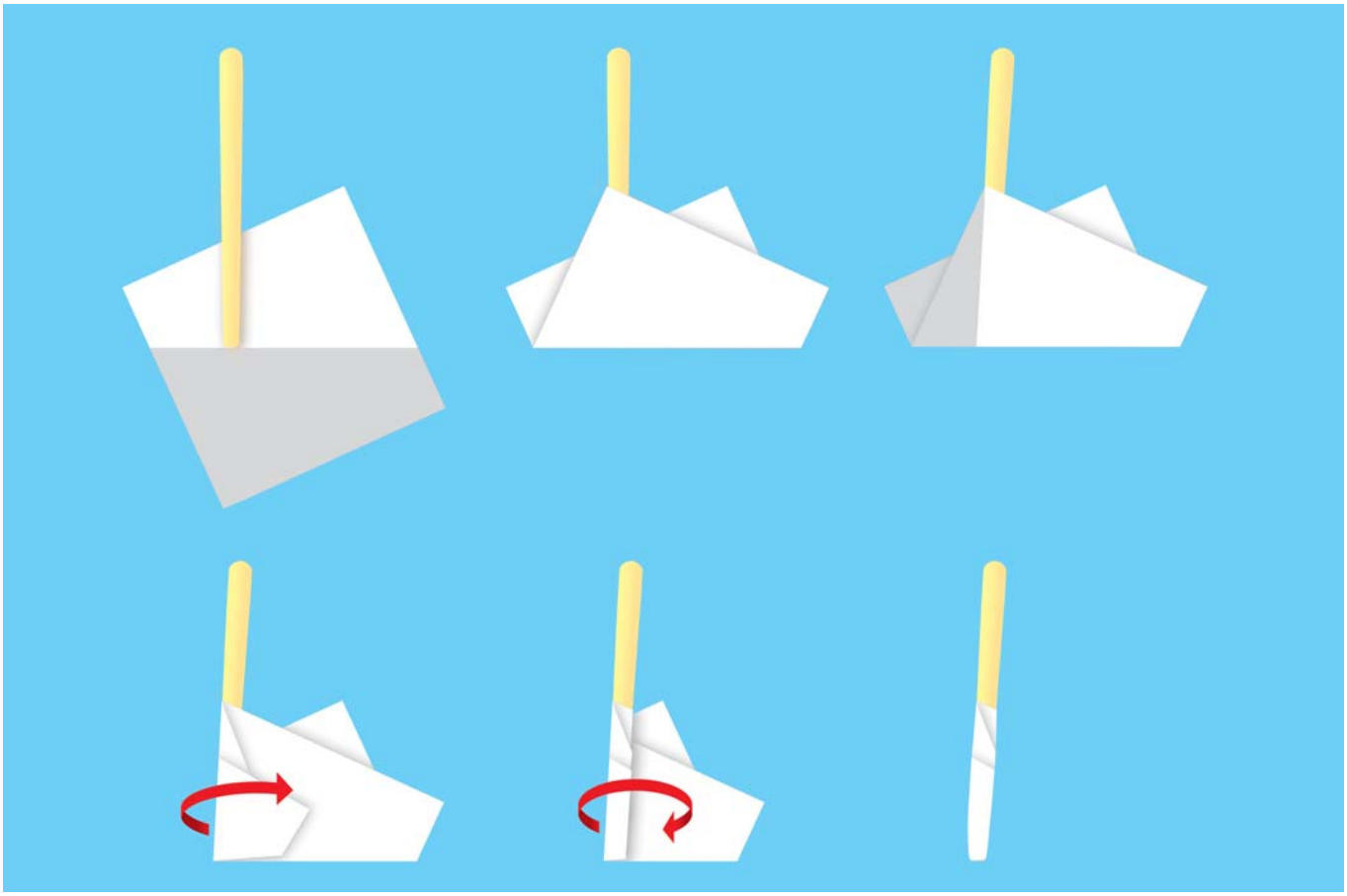
To prevent scratches on coatings and optical glass, remove dirt and dust that sticks to their surface with an air gun or blower brush.

Wrap the lens tissue around a bamboo stick as illustrated.

Clean the lens by putting a small amount of lens cleaning fluid or cleaning mixture (7 parts ether and 3 parts alcohol) on the tip of a lens tissue. Discard each lens tissue after a single use.

When cleaning a large lens surface, wipe from the centre towards the periphery in a circular motion.

CLEANING & MAINTENANCE OF YOUR MICROSCOPE



When cleaning large glass surfaces on both sides of an accessory such as a filter, fold two or three layers of lens tissue soaked in the cleaning mixture, hold the accessory at its edges and wipe from the centre towards the periphery as you slowly rotate it.

When cleaning the surfaces of the condenser and the light exit glass, hold a piece of lens tissue between your middle and index fingers, fold it and wrap it around your index finger. Hold the tissue down with your thumb while wiping the lens surfaces clean.

After cleaning, examine the lens surface with a magnifying glass. If colour reflected from the lens surface looks uneven, it is an indication that there is still dust specks and dirt on the lens. By viewing through the bottom of an eyepiece, you can use it as a magnifying glass.

When cleaning a large lens with lens tissue wrapped around your finger, you should wipe from the centre towards the periphery in a circular motion. Always use a clean part of the lens tissue as you rotate your index finger.

How to clean specimen slides:

Make it a habit to clean each specimen both before and after observation. For cleaning the specimen, a soft cloth, gauze or piece of lens tissue may be used without cleaning liquid. However, if the contamination is difficult to clean, breathe on the specimen before wiping it.

Points to note:

1. Removal of oil as well as routine cleaning can be done more easily if the specimen is removed from the stage.

2. When using cleaning mixture, use a moisturised cloth or cleaning tissue. Be certain not to apply excessive fluid as it may seep underneath the cover glass and damage the specimen.

Cleaning specimens with cover glasses:

Just as when cleaning lenses, wipe off the oil and dirt with a piece of lens tissue lightly moistened with cleaning mixture. As the oil cannot be completely removed with one wipe, repeat wiping until the oil film is removed.

Cleaning specimens without cover glasses:

Oil adhering to uncovered specimens cannot be wiped off. You can, however, remove the oil by immersing the specimen for 5 to 10 minutes
in a xylene bath. Containers are available for both horizontal and vertical immersion depending on your particular need.

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